# How finance looks different in emerging markets

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# About the claim: Finance research is different in emerging markets

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  - The questions are different.
  - The institutional landscape is profoundly different.

# About the claim: Finance research is different in emerging markets

- Accepted and understood:
  - The questions are different.
  - The institutional landscape is profoundly different.
- Where the usual research approach gets tripped up:
  1. Uncritically using data from EMs
  2. Assuming that what is well known in DMs is well known in EMs.
  3. Assuming that the political economy is the same in an EM and a DM.
  4. Imagining EMs as a source of interesting natural experiments that will interest editors and referees, without developing knowledge about the effect of the institutional difference.

# Problems with data

# Data problem 1: Weak government data

- Most researchers assume that data that comes from a government must be good.
- In India, the main pillars of government data are suspect –

  the GDP data, the Index of Industrial Production (IIP), the Annual Survey of Industries (ASI), a household survey (NSSO).
- When editors and referees do not know about these problems $\rightarrow$ low level equilibrium where papers based on this data becomes the mainstream literature.

# Data problem 2: high structural change

- At high growth rates, dynamics of the economic system change dramatically.
- Modern dynamic economies do not stay still long enough to allow for an accurate reading of their underlying structures.

  – Ben Bernanke.
- At 3% growth, the US doubles every 35 years. At 7% growth, India doubles every 10 years.
- India before 1990 is almost an unrecognisably different country.

  GDP in 1985 was USD.236 billion, GDP in 2015 was USD.2050 billion.
- This problem is acute in fast growing EMs, particularly when policy reforms are changing the DGP of the economy.

# Data problem 3: short time series

- Add to this the short time-series.

  Daily equity returns data starts from $1/1/1990 \rightarrow$ only 26 years of daily returns data.
- Add to this higher volatility.
- Any estimate of EM mean returns tend to have a much higher uncertainty than in DMs.
- This drives another wedge in looking at EM analysis in the same way as DM analysis.

# Gaps between DM and EM financial sector policy

# Central planning for finance in EMs vs. open markets in DMs

- EM finance is swamped in a central planning system:

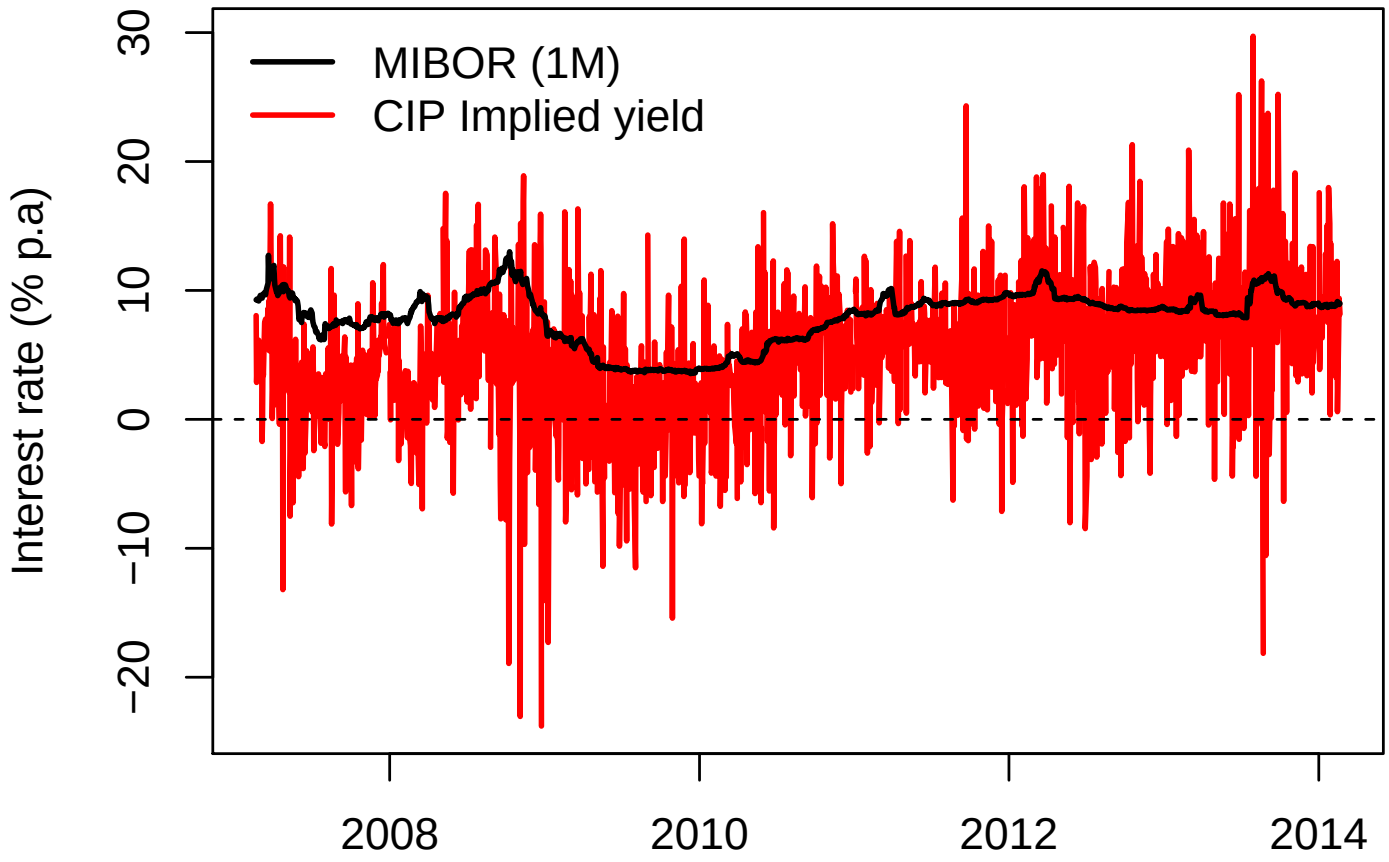
  Regulators explicitly write rules which prevent the functioning of markets, compared to what as seen in DMs.

  - Example: The Indian central bank has a limit on the unhedged position of each bank in currency futures (at $100 million). This chokes off CIP arbitrage.
  - Example: The capital controls law is 10,000 pages. Rules are written based on asset class, financial intermediary, specific assets being traded, etc.
    Every transaction is restricted by the comprehensive administrative capital controls.

- In DMs, the heterogeneity of market participants is accepted as crucial (Daniellson, 2013).

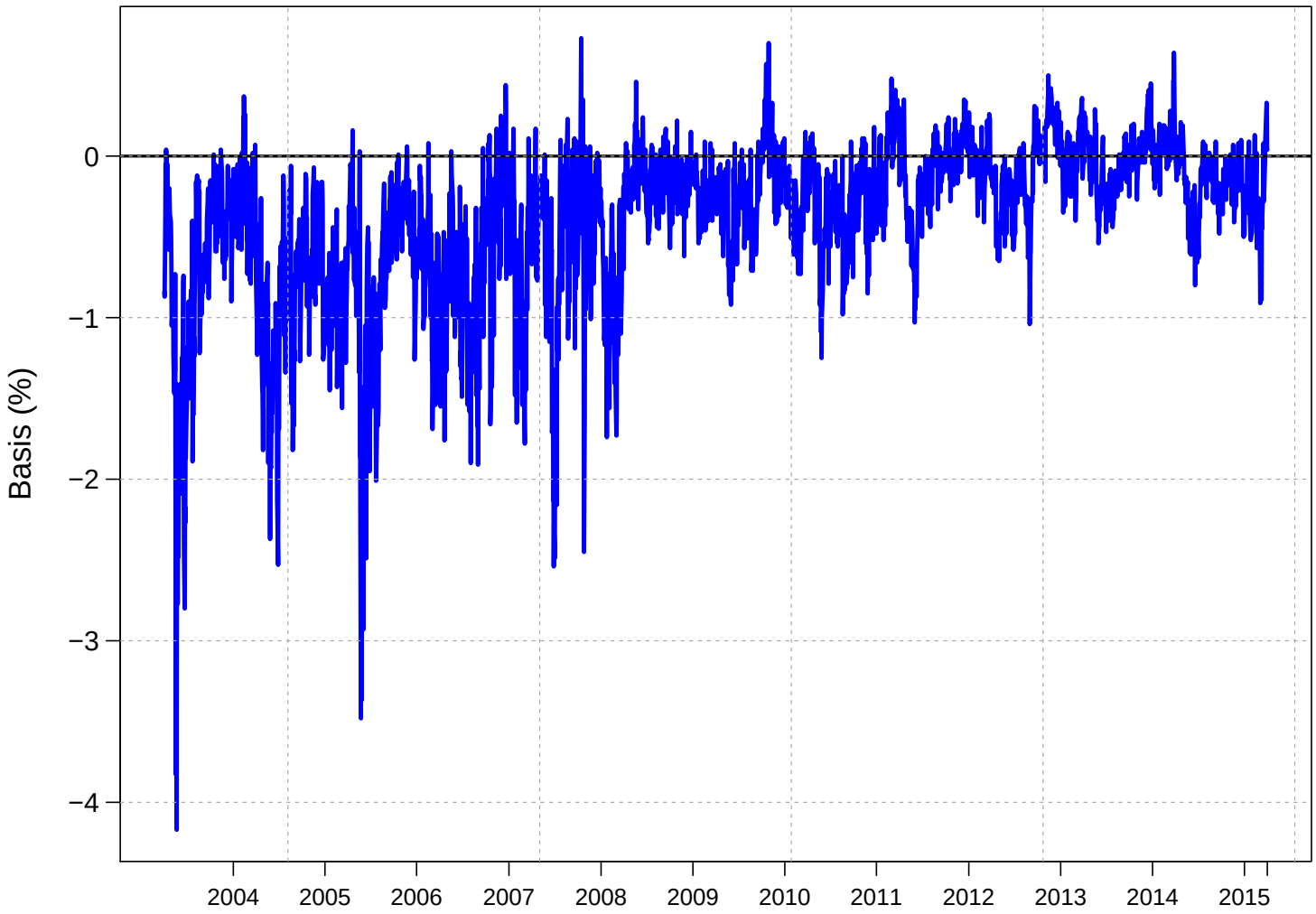
  Indian regulations frequently ban all non-bank participants. The banking regulator regulate all banks identically to manage financial stability.

# Consequences: chronic violations of no-arbitrage 1




Covered Interest Parity violations, daily data 2004-2014.

# Consequences: chronic violations of no-arbitrage 2




Equity index futures basis violations, daily data 2004-2016 (Aggarwal and Thomas, 2013, Aggarwal, 2015).

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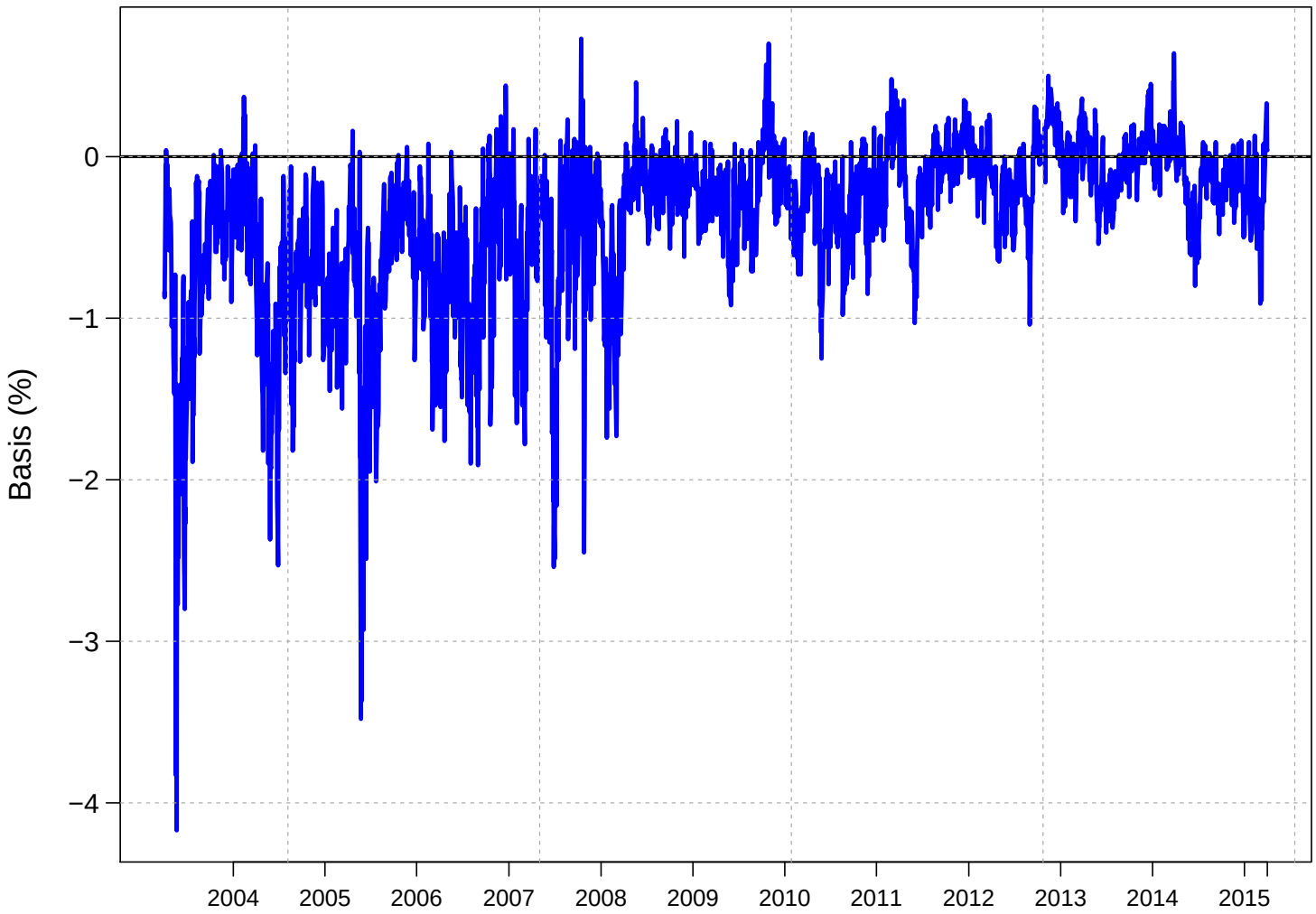
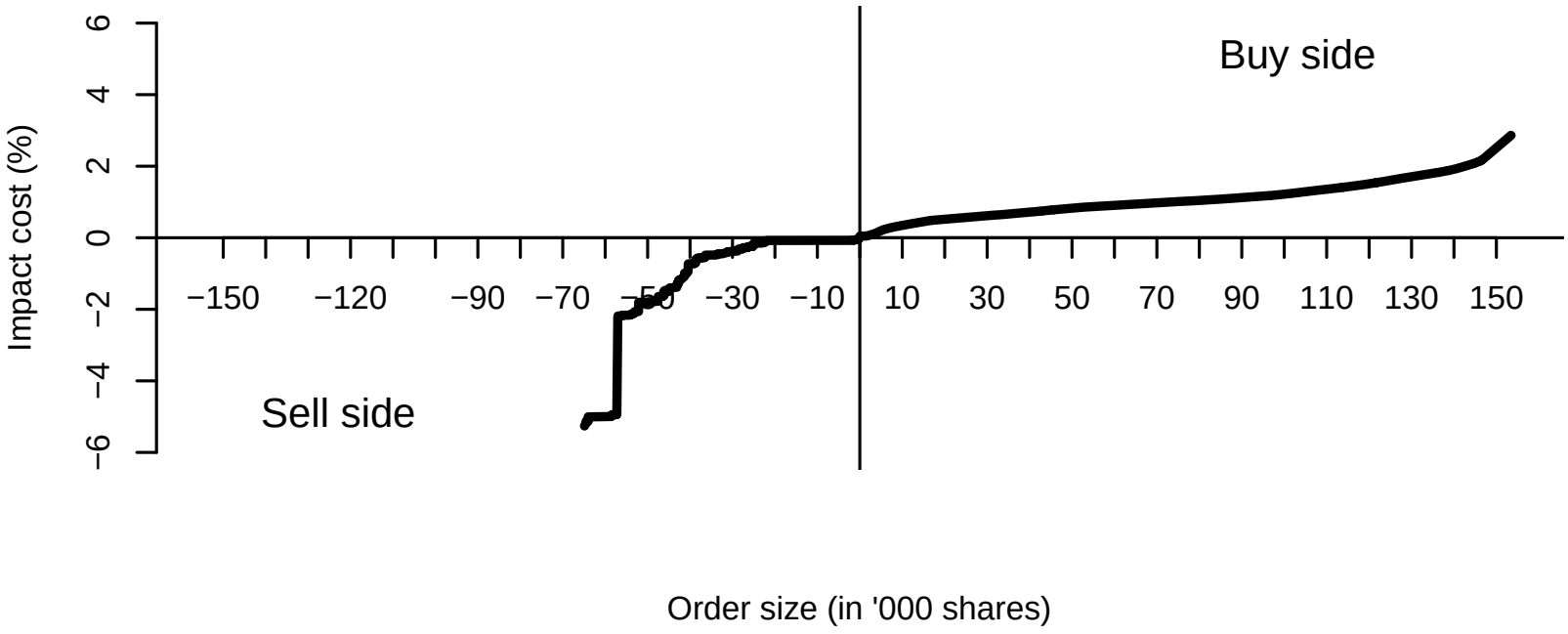


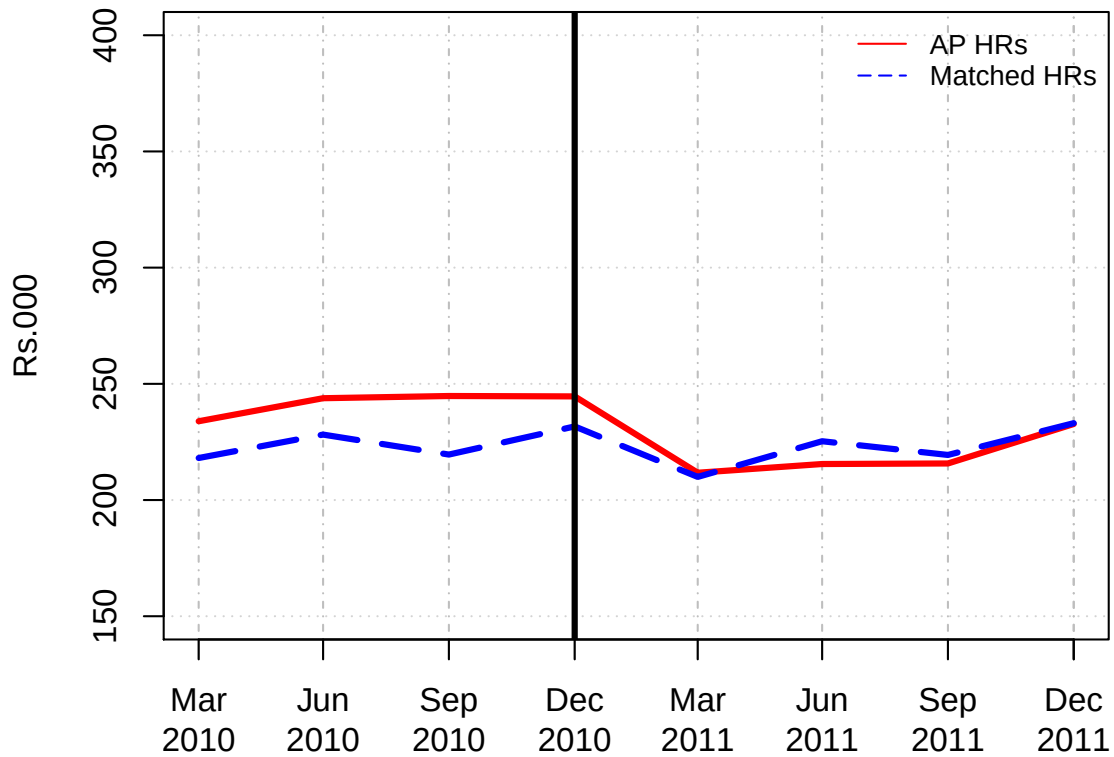

Equity index put-call partiy violations, daily data 2004-2016

# Consequences: high and skewed liquidity risk




Impact cost from a sample limit order for a single stock, 2012
(Tayal and Thomas, 2012)

# Consequences: impact of banning financial intermediaries




Consumption drop in treated regions where microfinance firms were banned, compared to control regions

(Sane and Thomas, 2016)

# New notion of 'systemic risk in EMs vs. DMs

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- But disruption of financial services is what we see most of the time in EMs.

  On most days, the EM financial system does not work properly for its end-users.
- This runs counter to from DM research and DM policy:

  DM concerns about systemic risk become a reason to block financial development. (IMF working paper, May 2015, *Rethinking financial deepening*.., by Sahay et al.)

  But the post-crisis thinking about too much financial development are out of place in EMs.

# Market microstructure matters more in EMs

- In the US environment, securities are very large, the financial ecosystem is sophisticated.
- Implication: market design does not matter much to build liquidity.

  E.g. TRACE was an important reform for the US corporate bond market (2002), but the reported gains in the academic literature are relatively modest.
- Key idea: When you deal with securities which are small and illiquid, every bit of liquidity matters.

  Then market design becomes critical.
- In India, establishment of sound market structures has yielded 10x gains in equity market liquidity.

# A very different political economy in EMs vs. DMs

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- Political economy in the EMs $\rightarrow$

  The private sector is mostly absent. There is a large presence of government ownership in the financial sector.

- This leads to biased incentives of staff in financial intermediaries and regulatory agencies in EMs. Public sector staff prefer low innovation to high cost of managing market risk.

- DM concern: proliferation of complex financial instruments that nobody understands.

  EM translation of concern into policy: ban established financial products like currency futures.

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  - Non-financial firms beat capital controls and become financial intermediaries.
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- Seen in China, India, S. Korea, Brazil.
- Need to approach finance research in EMs differently.

  Example: We started a project on SIFI identification and found SINFIs. (Aggarwal et al, October 2013)

# So why should we care about EM finance?

# The possibility of transformative change in EMs vs.DMs

- Cynical wisdom in DM policy: historical legacy is not too bad and it is hard to achieve deeper change. Aim for small improvements. Examples:
  1. Dodd-Frank Act: mostly incremental.
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  1. Dodd-Frank Act: mostly incremental.
  2. Market microstructure changes after the U.S. May 2010 flash crash: mostly incremental.
- When reforms do take place in EMs, the impact can be transformative. Examples
  1. In 1994, India switched from trading floor to electronic order book trading in the equity market – Nov 1994 to June 1995. Compare with (say) NYSE.
  2. India has one regulator for all derivatives markets merger of commodity futures. Compare with the U.S. CFTC and SEC.
  3. In 2016, we brought in a whole-sale rewrite of bankruptcy law. Not 100 small steps.
  4. In 2013, we proposed single modern financial law that replaces 61 existing financial law.

# Implications for finance research

- With the rise of China, India and EMs, everyone is keen to incorporate EMs into their work. But this work needs to recognise that EMs are not DMs.
- It needs a new paradigm, away from replicating existing papers with new datasets.
- Example of a paper located in contemporary DM research discussions using data from India, which does not reflect the Indian finance discourse:
  `http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2491591`
- Academic incentives encourage authors to pursue the interests of editors in the DM.

  Consequence? Papers which are often off centre in terms of the important questions, and often mishandle facts.

# Implications for finance research

- We need deep roots in knowing the real world and the mechanisms through which data is generated.
- The test of a good paper ought to be:
  *Is it an interesting question?*
  *Is it a persuasive research strategy?*

# Our work, research and policy

- Some papers from `http://www.ifrogs.org/papers.html`:
  1. *The real cost of credit constraints: Evidence from micro-finance*, Renuka Sane, Susan Thomas in *The B.E. Journal of Economic Analysis and Policy*, January 2016
  2. *The imprecision of volatility indexes*, Rohini Grover, Ajay Shah
  3. *Limits to arbitrage: The case of single stock futures and spot prices*, Nidhi Aggarwal.
  4. *When stock futures dominate price discovery*, Nidhi Aggarwal, Susan Thomas
  5. *A systematic approach to identify systemically important firms*, Natasha Agarwal, Sanchit Arora, Akhil Behl, Rohini Grover, Shashwat Khanna, Susan Thomas
- Policy work: `http:www.ifrogs.org/policy.html`
- Policy discourse: `http:www.ajayshahblogspot.com`

# Thank you

Questions / Comments?

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http:www.ifrogs.org